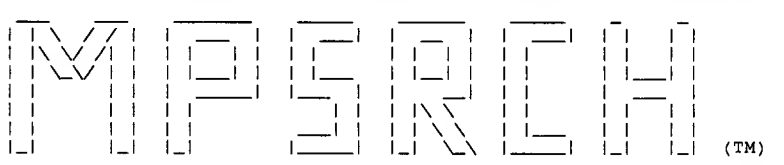

Release 3.1A John F. Collins, Biocomputing Research Unit.

MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Sat May 13 10:51:52 2000; MasPar time 4.08 Seconds
272.921 Million cell updates/sec
Tabular output not generated.

Title: >US-09-331-631-8
Description: (33-79) from US09331631.pep (2 of 4)
Perfect Score: 372
Sequence: 1 GDDDPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQRHR 47

Scoring table: PAM 150
Gap 11

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:geneseqp

Statistics: Mean 24.009; Variance 86.613; scale 0.277

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description	Pred. No.
1	372	100.0	590	1	W62832	Gossypium hirsutum ant	2.10e-31
2	181	48.7	525	1	W62831	Theobroma cacao antimi	3.74e-10
3	181	48.7	566	1	R20181	Sequence encoded by 67	3.74e-10
4	134	36.0	625	1	W62830	Macadamia integrifolia	3.24e-05
5	133	35.8	666	1	W62829	Macadamia integrifolia	4.11e-05
6	132	35.5	666	1	W62828	Macadamia integrifolia	5.20e-05
7	83	22.3	593	1	W62835	Zea mays antimicrobial	3.31e+00
8	79	21.2	28	1	W62841	Stenocarpus sinuatus a	7.71e+00
9	78	21.0	434	1	R96419	Peptide fragment of N-	9.50e+00
10	78	21.0	434	1	R96420	Peptide fragment of N-	9.50e+00
11	78	21.0	1931	1	R27649	Human calcium channel	9.50e+00
12	78	21.0	2237	1	R33550	Sequence of the alpha	9.50e+00
13	78	21.0	2237	1	W63142	Human calcium channel	9.50e+00
14	78	21.0	2237	1	R71006	Human neuronal calcium	9.50e+00
15	78	21.0	2337	1	W37878	Human calcium channel	9.50e+00
16	78	21.0	2339	1	R71005	Human neuronal calcium	9.50e+00
17	78	21.0	2339	1	R33549	Sequence of the alpha	9.50e+00
18	78	21.0	2339	1	W63141	Human calcium channel	9.50e+00
19	75	20.2	494	1	W73071	B. breve essential reg	1.77e+01
20	73	19.6	33	1	W62836	Zea mays antimicrobial	2.67e+01
21	73	19.6	35	1	R21079	Antimicrobial maize pe	2.67e+01
22	73	19.6	204	1	W53970	Myceliophthora thermop	2.67e+01
23	72	19.4	225	1	W04925	Cellulytic enzyme #1 o	3.27e+01
24	72	19.4	297	1	W04933	Chimeric endoglucanase	3.27e+01
25	72	19.4	308	1	W04934	Chimeric endoglucanase	3.27e+01
26	71	19.1	206	1	W95711	Homo sapiens fetal ret	4.01e+01
27	71	19.1	206	1	W09408	Human small CCN-like g	4.01e+01
28	71	19.1	206	1	W58704	Human small CCN-like g	4.01e+01
29	70	18.8	181	1	R91711	AcaNAP45.	4.90e+01
30	69	18.5	303	1	R60054	Dirofilaria immitis pa	5.99e+01
31	69	18.5	432	1	W93954	Human regulatory molec	5.99e+01
32	69	18.5	450	1	W46606	Tyrosine kinase associ	5.99e+01
33	69	18.5	673	1	W09430	Human FRX2 polypeptide	5.99e+01
34	69	18.5	971	1	W48896	Candida albicans CaCLA	5.99e+01
35	68	18.3	305	1	W44266	Humicola insolens EG V	7.32e+01
36	68	18.3	305	1	R88471	Alkaline endoglucanase	7.32e+01
37	68	18.3	305	1	R28300	43kD endoglucanase.	7.32e+01
38	68	18.3	305	1	R25464	Endoglucanase #1.	7.32e+01
39	68	18.3	305	1	R28295	Sequence of ~ 43 kD en	7.32e+01
40	68	18.3	305	1	R42063	Endoglucanase enzyme.	7.32e+01
41	68	18.3	305	1	R15271	Humicola insolens DSM	7.32e+01
42	68	18.3	305	1	R25525	Humicola insolens DSM	7.32e+01
43	68	18.3	305	1	R28818	H. insolens cellulase.	7.32e+01
44	68	18.3	305	1	R37150	Dye transfer inhibitin	7.32e+01
45	68	18.3	1141	1	W44777	Human Tbc-1 protein.	7.32e+01

ALIGNMENTS

RESULT 1
ID W62832 standard; Protein; 590 AA.
AC W62832;
DT 27-OCT-1998 (first entry)
DE Gossypium hirsutum antimicrobial protein.
KW antimicrobial protein; infestation; control.
OS Gossypium hirsutum.
PN WO9827805-A1.
PD 02-JUL-1998.
PF 22-DEC-1997; AU0874.
PR 20-DEC-1996; AU-004275.
PA (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR WPI; 98-377279/32.
PT Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT useful for controlling microbial infestations of plants or mammals
PS Claim 1; Page 49-51; 96pp; English.
CC The sequence is that of an antimicrobial protein which can
CC be used to control microbial infestations in plants and mammalian
CC animals.
SQ Sequence 590 AA;

Query Match 100.0%; Score 372; DB 1; Length 590;
Best Local Similarity 100.0%; Pred. No. 2.10e-31;
Matches 47; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 33 GDDDPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQRHR 79
||||||||||||||||||||||||||||||||||||||||||||||||
Qy 33 GDDDPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 2
ID W62831 standard; Protein; 525 AA.
AC W62831;
DT 27-OCT-1998 (first entry)
DE Theobroma cacao antimicrobial protein.
KW antimicrobial protein; infestation; control.
OS Theobroma cacao.
PN WO9827805-A1.
PD 02-JUL-1998.
PF 22-DEC-1997; AU0874.
PR 20-DEC-1996; AU-004275.
PA (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR WPI; 98-377279/32.
PT Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT useful for controlling microbial infestations of plants or mammals

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PS   Claim 1; Page 47-49; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   525 AA;

  Query Match           48.7%;  Score 181;  DB 1;  Length 525;
  Best Local Similarity  44.2%;  Pred. No. 3.74e-10;
  Matches    19;  Conservative   13;  Mismatches  11;  Indels   0;  Gaps   0;

Db      35 ERDPRQQYEQCQRRCESEATEEREQEQCEQRCEREYKEQQRQQ 77
           : ||  :||:|:|||| ::  ::||:|||: |  :| | ::||
Qy      34 DDDPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQ 76


RESULT    3
ID   R20181 standard; Protein; 566 AA.
AC   R20181;
DT   16-APR-1992  (first entry)
DE   Sequence encoded by 67 kD T. cacao protein cDNA.
KW   Cocoa; flavour; vicilin; seed storage protein.
OS   Theobroma cacao.
PN   WO9119801-A.
PD   26-DEC-1991.
PF   07-JUN-1991; G00914.
PR   11-JUN-1990; GB-013016.
PA   (MRSC ) MARS UK LTD.
PI   Spencer ME, Hodge R, Deakin EA, Ashton S;
DR   WPI; 92-024418/03.
DR   N-PSDB; Q20377.
PT   Recombinant cocoa proteins - are responsible for flavour in cocoa
PT   beans and produced in large quantities using yeast and bacterial
PT   expression vectors
PS   Claim 4; Fig 2; 59pp; English.
CC   The inventors claim a 67 kD and 31 kD T. cacao protein, and
CC   fragments, and encoding DNAs.  The 47 kD and 31 kD proteins are
CC   derived from the 67 kD precursor.  T. cacao protein cDNA was
CC   detected in a cDNA library prepared from immature cocoa beans RNA
CC   using a probe based on the AA sequence of a CNBr peptide common to
CC   the 47 kD and 31 kD polypeptides.  Homology searches revealed close
CC   homologies between the 67 kD polypeptide and the vicilins, which are
CC   seed storage proteins.
SQ   Sequence   566 AA;

  Query Match           48.7%;  Score 181;  DB 1;  Length 566;
  Best Local Similarity  44.2%;  Pred. No. 3.74e-10;
  Matches    19;  Conservative   13;  Mismatches  11;  Indels   0;  Gaps   0;

Db      35 ERDPRQQYEQCQRRCESEATEEREQEQCEQRCEREYKEQQRQQ 77
           : ||  :||:|:|||| ::  ::||:|||: |  :| | ::||
Qy      34 DDDPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQ 76


RESULT    4
ID   W62830 standard; Protein; 625 AA.
AC   W62830;
DT   27-OCT-1998  (first entry)
DE   Macadamia integrifolia antimicrobial protein.
KW   antimicrobial protein; infestation; control.
OS   Macadamia integrifolia.
FH   Key             Location/Qualifiers
FT   Peptide         1. .28
FT                   /note= "signal peptide"
FT   Protein         29. .666
FT                   /note= "mature protein"
PN   WO9827805-A1.
PD   02-JUL-1998.
PF   22-DEC-1997; AU0874.
PR   20-DEC-1996; AU-004275.
PA   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI   Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR   WPI; 98-377279/32.
DR   N-PSDB; V42316.
PT   Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT   useful for controlling microbial infestations of plants or mammals
PS   Claim 1; Page 43-45; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   625 AA;

  Query Match           36.0%;  Score 134;  DB 1;  Length 625;
  Best Local Similarity  34.1%;  Pred. No. 3.24e-05;
  Matches    15;  Conservative   12;  Mismatches  16;  Indels   1;  Gaps   1;

Db      80 DPQQQYEQCQKRCQRRETEPRHMQICQQRCERRYEKEKRKQQKR 123
           ||  :||:|:::||::     :  | |:: |  :|  ||  ||::
Qy      36 DPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYG-EKDQQQRH 78


RESULT    5
ID   W62829 standard; Protein; 666 AA.
AC   W62829;
DT   27-OCT-1998  (first entry)
DE   Macadamia integrifolia antimicrobial protein.
KW   antimicrobial protein; infestation; control.
OS   Macadamia integrifolia.
FH   Key             Location/Qualifiers
FT   Peptide         1. .28
FT                   /note= "signal peptide"
FT   Protein         29. .666
FT                   /note= "mature protein"
PN   WO9827805-A1.
PD   02-JUL-1998.
PF   22-DEC-1997; AU0874.
PR   20-DEC-1996; AU-004275.
PA   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI   Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR   WPI; 98-377279/32.
DR   N-PSDB; V42311.
PT   Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT   useful for controlling microbial infestations of plants or mammals
PS   Claim 1; Page 39-41; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   666 AA;

  Query Match           35.8%;  Score 133;  DB 1;  Length 666;
  Best Local Similarity  34.1%;  Pred. No. 4.11e-05;
  Matches    15;  Conservative   11;  Mismatches  17;  Indels   1;  Gaps   1;

Db     121 DPQQQYEQCQERCQRHETEPRHMQTCQQRCERRYEKEKRKQQKR 164
           ||  :||:|: ||::     :  | |:: |  :|  ||  ||::
Qy      36 DPPKRYEDCRRRCEWDTRGQKEQQQCEESCKSQYG-EKDQQQRH 78


RESULT    6
ID   W62828 standard; Protein; 666 AA.
AC   W62828;
DT   27-OCT-1998  (first entry)
DE   Macadamia integrifolia antimicrobial protein.
KW   antimicrobial protein; infestation; control.
OS   Macadamia integrifolia.
FH   Key             Location/Qualifiers
FT   Peptide         1. .28
FT                   /note= "signal peptide"
FT   Protein         29. .666
FT                   /note= "mature protein"
PN   WO9827805-A1.
PD   02-JUL-1998.
PF   22-DEC-1997; AU0874.
PR   20-DEC-1996; AU-004275.
PA   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI   Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR   WPI; 98-377279/32.
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DR   N-PSDB; V42310.
PT   Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT   useful for controlling microbial infestations of plants or mammals
PS   Claim 1; Page 34-36; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   666 AA;

  Query Match           35.5%;  Score 132;  DB 1;  Length 666;
  Best Local Similarity  50.0%;  Pred. No. 5.20e-05;
  Matches    17;  Conservative    7;  Mismatches   7;  Indels   3;  Gaps   3;

Db    188 DPQQREYEDCRRRCE-Q-QEPRQQHQCQLRCREQ 219
          ||  | |||||||||| : :  ::|:||:  |: |
Qy     36 DPPKR-YEDCRRRCEWDTRGQKEQQQCEESCKSQ 68


RESULT    7
ID   W62835 standard; Protein; 593 AA.
AC   W62835;
DT   27-OCT-1998  (first entry)
DE   Zea mays antimicrobial protein.
KW   antimicrobial protein; infestation; control.
OS   Zea mays.
PN   WO9827805-A1.
PD   02-JUL-1998.
PF   22-DEC-1997; AU0874.
PR   20-DEC-1996; AU-004275.
PA   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI   Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR   WPI; 98-377279/32.
PT   Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT   useful for controlling microbial infestations of plants or mammals
PS   Claim 1; Page 58-60; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   593 AA;

  Query Match           22.3%;  Score 83;  DB 1;  Length 593;
  Best Local Similarity  40.5%;  Pred. No. 3.31e+00;
  Matches    15;  Conservative    8;  Mismatches  11;  Indels   3;  Gaps   3;

Db     39 QCVRRCE-D-RPWHQRPRCLEQCREEEREK-RQERSR 72
          :| |||| | |   :: :| | |: :  || :|:| |
Qy     43 DCRRRCEWDTRGQKEQQQCEESCKSQYGEKDQQQRHR 79


RESULT    8
ID   W62841 standard; Protein; 28 AA.
AC   W62841;
DT   27-OCT-1998  (first entry)
DE   Stenocarpus sinuatus antimicrobial protein.
KW   antimicrobial protein; infestation; control.
OS   Stenocarpus sinuatus.
PN   WO9827805-A1.
PD   02-JUL-1998.
PF   22-DEC-1997; AU0874.
PR   20-DEC-1996; AU-004275.
PA   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
PI   Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;
DR   WPI; 98-377279/32.
PT   Novel anti-microbial protein from e.g. Macadamia integrifolia -
PT   useful for controlling microbial infestations of plants or mammals
PS   Claim 1; Page 66; 96pp; English.
CC   The sequence is that of an antimicrobial protein which can
CC   be used to control microbial infestations in plants and mammalian
CC   animals.
SQ   Sequence   28 AA;

  Query Match           21.2%;  Score 79;  DB 1;  Length 28;
  Best Local Similarity  34.6%;  Pred. No. 7.71e+00;
  Matches     9;  Conservative    9;  Mismatches   8;  Indels   0;  Gaps   0;

Db      2 DPIRQQQLCQMRCQQQEKDPRQQQQC 27
          || :: : |: ||: : :  ::|||| |
Qy     36 DPPKRYEDCRRRCEWDTRGQKEQQQC 61


RESULT    9
ID   R96419 standard; peptide; 434 AA.
AC   R96419;
DT   11-NOV-1996  (first entry)
DE   Peptide fragment of N-type calcium channel.
KW   Calcium channel; synapse; synaptic vesicle; presynaptic; syntaxin;
KW   synaptosome; neuronal cell death; ishaemia; stroke; epilepsy;
KW   cognitive deficit; inhibition; screening; detection; treatment.
OS   Rattus rattus.
FH   Key             Location/Qualifiers
FT   region          718. .1141
FT                   /note= "Claimed peptide region."
PN   WO9615149-A2.
PD   23-MAY-1996.
PF   09-NOV-1995; U14776.
PR   10-NOV-1994; US-337602.
PA   (UNIW ) UNIV WASHINGTON.
PI   Catterall WA,  Sheng Z;
DR   WPI; 96-259782/26.
PT   Screening for presynaptic calcium channel blockers - identifies
PT   compounds which inhibit docking of presynaptic vesicles to calcium
PT   channels, rather than compounds which inhibit calcium influx
PS   Claim 7; Figure 11A; 53pp; English.
CC   A method of screening for compounds that inhibit the interaction
CC   between presynaptic calcium channels and presynaptic vesicles
CC   comprises contacting calcium channel-like peptide with a candidate
CC   compound under conditions sufficient to permit binding between the
CC   peptide and the candidate compound, where the peptide is able to
CC   bind syntaxin or synaptosome associated protein, and then detecting
CC   the presence or absence of binding between the peptide and the
CC   candidate compound, thereby determining whether the candidate
CC   compound bound to the peptide. The method allows for the screening
CC   of compounds which inhibit the docking of presynaptic vesicles to
CC   calcium channels and which therefore prevent neurotransmitter release
CC   by binding to a selected presynaptic calcium channel-like peptide.
CC   Isolated compounds may be used in the prevention of neuronal cell
CC   death that accompanies cerebral ischaemia. They may also be used in
CC   the treatment of stroke, cognitive deficit related to cardiac
CC   surgery and neuronal damage caused during acute epileptic episodes.
CC   This sequence corresponds to the LII-III loop (amino acids 710-1143
CC   of the rat N-type calcium channel.
SQ   Sequence   434 AA;

  Query Match           21.0%;  Score 78;  DB 1;  Length 434;
  Best Local Similarity  33.3%;  Pred. No. 9.50e+00;
  Matches    12;  Conservative    8;  Mismatches  15;  Indels   1;  Gaps   1;

Db     55 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 90
          : |  |: |: |   |    || : |:|:| ::| |
Qy     45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79


RESULT   10
ID   R96420 standard; peptide; 434 AA.
AC   R96420;
DT   11-NOV-1996  (first entry)
DE   Peptide fragment of N-type calcium channel.
KW   Calcium channel; synapse; synaptic vesicle; presynaptic; syntaxin;
KW   synaptosome; neuronal cell death; ishaemia; stroke; epilepsy;
KW   cognitive deficit; inhibition; screening; detection; treatment.
OS   Homo sapiens.
FH   Key             Location/Qualifiers
FT   region          717. .1143
FT                   /note= "Claimed peptide region."
PN   WO9615149-A2.
PD   23-MAY-1996.
```

PF 09-NOV-1995; U14776.
PR 10-NOV-1994; US-337602.
PA (UNIW) UNIV WASHINGTON.
PI Catterall WA, Sheng Z;
DR WPI; 96-259782/26.
PT Screening for presynaptic calcium channel blockers - identifies
PT compounds which inhibit docking of presynaptic vesicles to calcium
PT channels, rather than compounds which inhibit calcium influx
PS Claim 13; Figure 11B; 53pp; English.
CC A method of screening for compounds that inhibit the interaction
CC between presynaptic calcium channels and presynaptic vesicles
CC comprises contacting calcium channel-like peptide with a candidate
CC compound under conditions sufficient to permit binding between the
CC peptide and the candidate compound, where the peptide is able to
CC bind syntaxin or synaptosome associated protein, and then detecting
CC the presence or absence of binding between the peptide and the
CC candidate compound, thereby determining whether the candidate
CC compound bound to the peptide. The method allows for the screening
CC of compounds which inhibit the docking of presynaptic vesicles to
CC calcium channels and which therefore prevent neurotransmitter release
CC by binding to a selected presynaptic calcium channel-like peptide.
CC Isolated compounds may be used in the prevention of neuronal cell
CC death that accompanies cerebral ischaemia. They may also be used in
CC the treatment of stroke, cognitive deficit related to cardiac
CC surgery and neuronal damage caused during acute epileptic episodes.
CC This sequence corresponds to the LII-III loop (amino acids 710-1143
CC of the rat N-type calcium channel.
SQ Sequence 434 AA;

Query Match 21.0%; Score 78; DB 1; Length 434;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 54 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 89
: | |: |: | | || : |:|:| ::| |
Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 11
ID R27649 standard; Protein; 1931 AA.
AC R27649;
DT 03-MAR-1993 (first entry)
DE Human calcium channel 27980/11.
KW Plasmid pR14-5.3.3.1; Ca-flux assay.
OS Homo sapiens.
FH Key Location/Qualifiers
FT misc_difference 1165
FT /note= "encoded by GNG codon, N is unknown"
PN EP-507170-A.
PD 07-OCT-1992.
PF 23-MAR-1992; 104970.
PR 04-APR-1991; DE-110785.
PA (FARB) BAYER AG.
PI Franz J, Rae P, Unterbeck A, Weingaertner B;
DR WPI; 92-333446/41.
DR N-PSDB; Q29269.
PT Cloned human neuronal calcium channel sub-types - useful in
PT calcium flux assays to screen for neurone-specific calcium
PT channel ligands
PS Claim 2; Page 63-77; 101pp; German.
CC Human neuroblastoma cell line, hippocampus, frontal and temporal
CC cortex and visual cortex cDNA banks were screened with a probe
CC containing carp skeletal muscle Ca-channel cDNA. The cDNA clone
CC pR14-5.3.3.1 overlaps with clone p1247-14.1.1.1 (see Q29263).
CC There were a number of differences between the two sequences
CC including the deletion of an Adenosine residue at position 1013 of
CC p1247-14.1.1.1 which leads to a stop codon at position 1028-1030;
CC the deletion is thought to be a cloning artefact. The human
CC neuronal calcium channel protein can be used for screening for Ca
CC channel ligands (agonists or antagonists). See also Q29259-Q29275.
SQ Sequence 1931 AA;

Query Match 21.0%; Score 78; DB 1; Length 1931;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 355 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 390
: | |: |: | | || : |:|:| ::| |
Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 12
ID R33550 standard; Protein; 2237 AA.
AC R33550;
DT 30-JUN-1993 (first entry)
DE Sequence of the alpha 1B-2 human calcium channel subunit.
KW Human calcium channel subunit; diagnosis; agonist; antagonist;
KW Lambert Eaton syndrome.
OS Homo sapiens.
PN WO9304083-A.
PD 04-MAR-1993.
PF 14-AUG-1992; U06903.
PR 15-AUG-1991; US-745206.
PR 10-APR-1992; US-868354.
PA (SALK) SALK INST BIOTECHNOLOGY IND ASSOC.
PI Brenner R, Ellis SB, Feldman DH, Harpold MM, Mccue AF,
PI Williams ME;
DR WPI; 93-093936/11.
DR N-PSDB; Q37818.
PT DNA encoding specific human calcium channel sub-units - used for
PT identifying calcium channel agonists and antagonists and
PT diagnosing Lambert Eaton syndrome
PS Disclosure; Page 120-128; 150pp; English.
CC DNA encoding the alpha 1B subunit was isolated by screening a
CC human basal ganglia cDNA library with fragments of the rabbit
CC skeletal muscle calcium channel alpha 1 subunit-encoding cDNA.
CC A portion of one of the positive clones was used to screen an IMR32
CC cell cDNA library. Clones that hybridized to the basal ganglia
CC DNA prove were used to further screen an IMR32 cell cDNA library
CC to identify overlapping clones that in turn were used to screen a
CC human hippocampus cDNA library. In this way, a sufficient series of
CC clones to span nearly the entire length of the nucleotide sequence
CC encoding the human alpha 1B subunit was obtained. PCR amplification
CC of specific regions of the IMR32 cell alpha 1B mRNA yielded
CC additonal segments of the alpha 1B coding sequence. A full-length
CC alpha 1B DNA clone was constructed by ligating portions of the
CC partial cDNA clones (see Q37817, Q37818). Alpha 1B-1 and alpha
CC 1B-2 are derived by alternative splicing of the alpha 1B subunit
CC transcript.
SQ Sequence 2237 AA;

Query Match 21.0%; Score 78; DB 1; Length 2237;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 763 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 798
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Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 13
ID W63142 standard; Protein; 2237 AA.
AC W63142;
DT 12-OCT-1998 (first entry)
DE Human calcium channel alpha-1B-1 subunit, encoded by a splice variant.
KW Alpha-1B subunit; human; calcium channel; assay; detection;
KW characterisation; Lambert Eaton Syndrome; LES; diagnosis.
OS Homo sapiens.
PN US5792846-A.
PD 11-AUG-1998.
PF 31-MAY-1995; 455543.
PR 04-APR-1994; US-223305.
PR 04-APR-1988; US-176899.
PR 04-APR-1989; US-603751.
PR 04-APR-1989; WO-U01408.
PR 20-FEB-1990; US-482384.

PR 30-NOV-1990; US-620250.
PR 15-AUG-1991; US-745206.
PR 31-MAY-1995; US-455543.
PA (SIBI-) SIBIA NEUROSCIENCES INC.
PI Brenner R, Ellis SB, Feldman DH, Harpold MM, McCue AF,
PI Williams ME;
DR WPI; 98-456192/39.
DR N-PSDB; V42686.
PT DNA encoding human calcium channel alpha 1B sub:unit protein -
PT useful for recombinant production of the channel for screening of
PT its modulators, and diagnosis of Lambert Eaton Syndrome
PS Claim 1; Columns 249-262; 166pp; English.
CC The present sequence represents the alpha-1B subunit of a human calcium
CC channel. The DNA sequence encoding this protein is derived from
CC alternative splicing of V42685. Calcium channels are membrane-spanning,
CC multi-subunit proteins that allow controlled entry of calcium ions into
CC cells. This leads to depolarisation events required for muscle
CC contraction. The recombinant subunit, when expressed with nucleic acids
CC encoding the complete calcium channel, can be used in assays for the
CC detection and characterisation of compounds that modulate the channel.
CC The DNA encoding the subunits can be alternatively spliced when
CC transcribed, giving more than one form of the protein from the same
CC transcript, each having slightly different properties. In addition, the
CC reactivity of the alpha 1 subunit with IgG molecules from the serum of
CC an individual with Lambert Eaton Syndrome (LES) can be used as a
CC diagnostic for the disease.
SQ Sequence 2237 AA;

Query Match 21.0%; Score 78; DB 1; Length 2237;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 763 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 798
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Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 14
ID R71006 standard; Protein; 2237 AA.
AC R71006;
DT 01-DEC-1995 (first entry)
DE Human neuronal calcium channel subunit alpha 1B-2.
KW Calcium channel subunit; antagonist; agonist; diagnosis;
KW Lambert Eaton Syndrome.
OS Homo sapiens.
PN WO9504822-A.
PD 16-FEB-1995.
PF 11-AUG-1994; U09230.
PR 11-AUG-1993; US-105536.
PR 05-NOV-1993; US-149097.
PA (SALK) SALK INST BIOTECHNOLOGY IND ASSOC.
PI Ellis SB, Gillespie A, Harpold MM, Mccue AF, Williams ME;
DR WPI; 95-090900/12.
DR N-PSDB; Q84658.
PT DNA encoding human calcium channel sub-unit(s) - used for
PT developing prods. for studying calcium channels, e.g. for
PT obtaining agonists and antagonists
PS Disclosure; Page 149-160; 285pp; English.
CC DNA encoding the alpha 1B subunit was isolated by screening a
CC human basal ganglia cDNA library with fragments of the rabbit
CC skeletal muscle calcium channel alpha 1 subunit-encoding cDNA.
CC A portion of one of the positive clones was used to screen an
CC IMR32 cell cDNA library. Clones that hybridised to the basal
CC ganglia probe were used to further screen an IMR32 cell cDNA
CC library to identify overlapping clones that in turn were used
CC to screen a human hippocampus cDNA libary. A series of clones
CC to span nearly the entire length of the nt. sequence encoding
CC the human alpha 1B subunit was obtd. Nucleic acid amplification
CC of specific regions of the IMR32 cell alpha 1B mRNA yielded
CC additional segments of the alpha 1B coding sequence. A full-
CC length alpha 1B DNA clone was constructed by ligating portions
CC of the partial cDNA clones. Nucleic acid amplification analysis
CC of IMR32 cell RNA and genomic DNA using oligo primers corresp. to
CC sequences located 5' and 3' of the stop codon of the DNA encoding
CC the alpha 1B subunit revealed an alternatively spliced alpha
CC 1B-encoding mRNA in IMR32 cells. This second mRNA product is the
CC result of differential splicing of the alpha 1B subunit transcript
CC to include another exon that is not present in the mRNA corresp.
CC to the other 3' alpha 1B cDNA sequence that was initially isolated.
CC The alpha 1B subunit encoded by a DNA sequence contg. an additional
CC exon is referred to as alpha 1B-1 and given in Q84657/R71005,
CC whereas the other form is referred to as alpha 1B-2 and is given in
CC Q84658/R71006. Following the sequence of the additional exon in
CC alpha 1B-1 the alpha 1B-1 and alpha 1B-2 seuences are identical.
SQ Sequence 2237 AA;

Query Match 21.0%; Score 78; DB 1; Length 2237;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 763 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 798
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Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

RESULT 15
ID W37878 standard; Protein; 2337 AA.
AC W37878;
DT 28-AUG-1998 (first entry)
DE Human calcium channel $a1B_1$ subunit.
KW Calcium channel; human; central nervous system disorder;
KW Lambert-Eaton syndrome; diagnosis; therapy.
OS Homo sapiens.
PN WO9811131-A2.
PD 19-MAR-1998.
PF 11-SEP-1997; U16146.
PR 16-SEP-1996; US-713118.
PA (AMHP) AMERICAN HOME PROD CORP.
PI Chen ARS, Franco R, Shuey DJ;
DR WPI; 98-207325/18.
DR N-PSDB; V29059.
PT DNA encoding human neuronal calcium channel subunit(s) - useful for
PT diagnosis of and treatment of central nervous system disorders, e.g.
PT Lambert-Eaton syndrome
PS Disclosure; Fig 1; 89pp; English.
CC This polypeptide comprises the a1B subunit of the human neuronal
CC calcium channel. cDNA clones (see V29059-61) encoding the a1B
CC subunit, the a2d subunit (see W37879) and a b3 subunit (see W37880)
CC have been isolated. These have been inserted into expression
CC vectors and are stably expressed in transformed cell lines. The
CC transformed cells show omega-conotoxin GVIA binding activity,
CC and omega-conotoxin GVIA toxin sensitive potassium-stimulated
CC calcium upstake, indicating that the proteins expressed by the
CC clones are capable of forming a functioning calcium channel.
CC Nucleic acids encoding the 3 subunits, as well as vectors, host
CC cells and methods of isolating nucleic acids encoding related
CC calcium channels are disclosed. Fusion proteins incorporating the
CC subunit proteins, antibodies, and assays for identifying agents
CC that modulate calcium channel activity are also provided. Such
CC agents can be used to treat certain central nervous system
CC disorders by altering calcium channel activity. Methods of
CC diagnosing diseases associated with particular calcium channels,
CC such as Lambert-Eaton syndrome, are disclosed.
SQ Sequence 2337 AA;

Query Match 21.0%; Score 78; DB 1; Length 2337;
Best Local Similarity 33.3%; Pred. No. 9.50e+00;
Matches 12; Conservative 8; Mismatches 15; Indels 1; Gaps 1;

Db 763 KARSVWEQRASQLRLQNLRASCEALYSEMDPEERLR 798
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Qy 45 RRRCEWDTRG-QKEQQQCEESCKSQYGEKDQQQRHR 79

Search completed: Sat May 13 10:52:01 2000
Job time : 9 secs.